

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) An optical measuring system for use in assembling an objective, having a ~~measuring machine that is provided at least with~~ a measuring ~~element~~means for determining ~~locations~~distance, and ~~at least with~~ a measuring ~~element~~means for determining angles, at least one common reference surface being provided for use with the location~~distance~~-determining measuring element and the angle-determining measuring element.

2. (Currently amended) The optical measuring system as claimed in claim 1, characterized in that the ~~location~~distance-determining measuring ~~element~~means has tactile probes.

3. (Currently amended) The optical measuring system as claimed in claim 1, characterized in that the angle-determining measuring ~~element~~means has an autocollimation telescope or an interferometer.

4. (Currently amended) The optical measuring system as claimed in claim 1, characterized in ~~that the tactile measuring system is provided with~~ a measuring table and a measuring head, which has at least one measuring element, and in that the optical measuring system has a light beam source, a system for beam shaping, a system for imaging, and at least one optical measuring head.

5. (Currently amended) The optical measuring system as claimed in claim 1, characterized in that the common reference surface is formed by the surface of ~~the~~a measuring table, by the very components or modules to be measured, or by an additional reference part.

6. (Currently amended) The optical measuring system as claimed in claim 4, characterized in that provided in the measuring table in the region of the components to be measured is a measuring bore via which the ~~measuring~~light beams are introduced directly or indirectly via beam deflecting elements.

7. (Original) The optical measuring system as claimed in claim 1, characterized in that in the case of an objective as module the latter is formed from at least two frame structures.

8. (Original) The optical measuring system as claimed in claim 7, characterized in that a lower frame structure is provided with a reference surface on which an optical subsystem that is provided with at least one reference surface is mounted.

9. (Original) The optical measuring system as claimed in claim 8, characterized in that the optical subsystem is designed as a refractive part of the objective.

10. (Original) The optical measuring system as claimed in claim 8, characterized in that the at least one reference surface is designed as a centering collar.

11. (Original) The optical measuring system as claimed in claim 8, characterized in that the reference surfaces of the subsystem form a reference point that is adjusted relative to a reference point of an upper frame structure.

12. (Original) The optical measuring system as claimed in claim 11, characterized in that the reference point in the upper frame structure is formed by the tip of a double mirror.

13. (Original) The optical measuring system as claimed in claim 8, characterized in that air bearings are provided for displacing the upper frame structure on the lower frame structure.

14. (Original) The optical measuring system as claimed in claim 8, characterized in that fine adjustment elements are provided for displacing the upper frame structure on the lower frame structure.

15. (Original) The optical measuring system as claimed in claim 7, characterized in that interface surfaces of the two frame structures are formed by external surfaces.

16. (Original) The optical measuring system as claimed in claim 15, characterized in that the interface surfaces are created by surface lapping/polishing for a high angle accuracy and flatness.

17. (Original) The optical measuring system as claimed in claim 11, characterized in that the measuring table is provided with a lifting table by means of which a subsystem flanged onto the upper frame structure can be displaced along the fastening plane of the subsystem on the upper frame structure.

18. (Original) The optical measuring system as claimed in claim 17, characterized in that the flanged-on subsystem is designed as a mirror group.

19. (Original) The optical measuring system as claimed in claim 17, characterized in that the lifting table is provided with piezoceramic elements for adjusting the lifting table.

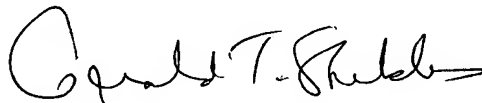
20. (Currently amended) ~~An objective that is assembled according to The~~
optical measuring system of claim 1, wherein the assembled objective is used for
producing semiconductor chips in a lithographic imaging process.

21. (Currently amended) ~~A~~The optical measuring system of claim 1 comprising
adjusting projection objective for microlithography, ~~characterized in that it is adjusted with~~
the aid of ~~a~~said system ~~as claimed in claim 1.~~

22. (Currently amended) A projection objective measuring system having a
~~measuring machine that is provided at least with a measuring element means for~~
~~determining locations~~distances and at least ~~with a measuring element means for~~
determining angles, at least one common reference surface being provided for the
~~location~~distances-determining measuring element means and the angle-determining
measuring element.

Claims 23-50. (Cancelled)

Respectfully submitted,
WELSH & KATZ, LTD.



Gerald T. Shekleton
Registration No. 27,466

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WELSH & KATZ, LTD.
120 South Riverside Plaza
22nd Floor
Chicago, Illinois 60606-3912
Telephone: (312) 655-1500
Facsimile: (312) 655-1501